

SYSTEM FOR SEPARATING FLUID-BORNE MATERIAL FROM A FLUID THAT  
CARRIES PARTICULATE MATTER ALONG WITH THE MATERIAL  
ABSTRACT OF THE DISCLOSURE

A system for screening fluid-borne material from a fluid that carries particulate matter along with the material, e.g. for screening usable fibers in papermaking or tissue making white water that also contains waste material such as fines and ash. The system employs a flexible and pliable screen to which the fluid is applied. The screen is supported in a suspended manner from a frame. The fluid is directed onto an inside surface defined by the screen, and the location at which the fluid strikes the screen is varied so as to result in bending and flexing of the screen due to the flexibility and pliability of the screen material. In this manner, the configuration of the screen drainage passages is continuously altered, to provide a self-cleaning action that prevents the screen passages from plugging or blinding over. In one form, the screen is generally frustoconical, and the fluid is applied to the inside surface of the screen in a manner which results in rotation of the screen. The material retained on the screen is directed toward a discharge opening defined by the lower end of the frustoconical screen, and the waste water including the particulate matter passes through the screen and is collected in a waste water collection tank. In another form, the screen is suspended from a frame to form a trough configuration having an open discharge end. The frame is movable in either an axial direction or a transverse direction, to cause movement of the screen and to obtain the desired flexing and bending of the screen to self-clean the screen drainage passages.